```
>>> import pandas as pd
>>> from pandas import read_csv
>>> import csv, os
>>> os.chdir('/Applications/nychatest/HUD')
>>> os.getcwd()
'/Applications/nychatest/HUD'
>>> os.listdir()
['multifamily-physical-inspection-scores-2016.xlsx', 'public-housing-physical-
inspection-scores-2016.xlsx']
>>> xlFile = 'public-housing-physical-inspection-scores-2016.xlsx'
>>> scoreDF = pd.ExcelFile(xlFile)
>>> scoreDF = scoreDF.parse('June 2016 PH deelopment')
>>> scoreDF.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7257 entries, 0 to 7256
Data columns (total 19 columns):
INSPECTION_ID
                     7257 non-null int64
DEVELOPMENT ID
                     7257 non-null object
DEVELOPMENT_NAME
                     7257 non-null object
ADDRESS
                     6773 non-null object
CITY
                     7257 non-null object
                     6214 non-null object
CBSA_NAME
CBSA_CODE
                     7253 non-null float64
                     7253 non-null object
COUNTY_NAME
COUNTY_CODE
                     7253 non-null float64
STATE NAME
                     7257 non-null object
STATE_CODE
                     7257 non-null int64
                     7253 non-null float64
7253 non-null float64
ZIP
LATITUDE
LONGITUDE
                     7253 non-null float64
LOCATION_QUALITY
                     7253 non-null object
                     7257 non-null object
PHA_CODE
PHA NAME
                     7257 non-null object
INSPECTION_SCORE
                     7257 non-null int64
INSPECTION_DATE
                     7257 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 1.1+ MB
>>> cities = ['Manhattan',
                           'Brooklyn', 'Bronx', 'Queens', 'Staten Island']
>>> maskNewYork = scoreDF['CITY'].isin(cities)
>>> maskNewYork.info()
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-
packages/pandas/core/generic.py", line 2744, in __getattr__
return object.__getattribute__(self, name)
AttributeError: 'Series' object has no attribute 'info'
>>> scoreDF = scoreDF[maskNewYork]
>>> scoreDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 116 entries, 99 to 7247
Data columns (total 19 columns):
INSPECTION_ID
                     116 non-null int64
DEVELOPMENT_ID
                     116 non-null object
                     116 non-null object
DEVELOPMENT_NAME
ADDRESS
                     116 non-null object
CITY
                     116 non-null object
CBSA_NAME
                     116 non-null object
CBSA_CODE
                     116 non-null float64
COUNTY_NAME
                     116 non-null object
COUNTY_CODE
                     116 non-null float64
STATE_NAME
                     116 non-null object
STATE_CODE
                     116 non-null int64
7<sub>TP</sub>
                     116 non-null float64
LATITUDE
                     116 non-null float64
LONGTTUDE
                     116 non-null float64
LOCATION_QUALITY
                     116 non-null object
                     116 non-null object
PHA CODE
PHA_NAME
                     116 non-null object
                     116 non-null int64
INSPECTION SCORE
INSPECTION_DATE
                     116 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 18.1+ KB
>>> scoreDF.head()
     INSPECTION_ID DEVELOPMENT_ID
                                         DEVELOPMENT_NAME
                                                                        ADDRESS
                                             WILLIAMSBURG
                                                                 125 Ten Eyck St
99
            507374
                       NY005000020
100
            507385
                       NY005010390
                                           PELHAM PARKWAY
                                                                 2440 Boston Rd
```

```
507492
                        NY005013410 UNIVERSITY AVE REHAB 1925 University Ave
101
                                                                    12A Tiffany St
300 N 5th St
             510796
                                            SCATTERED SITES
277
                        CT066000001
                                            APARTMENT TOWER
438
             521746
                        KS063000001
          CITY
                                                             CBSA_NAME CBSA_CODE
                 New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
99
      Brooklyn
                                                                            35614.0
100
                                                                            35614.0
          Bronx
101
                 New York-Jersey City-White Plains, NY-NJ Metro...
                                                                            35614.0
          Bronx
277
                    Worcester, MA-CT Metropolitan Statistical Area
                                                                            49340.0
      Brooklyn
                        Manhattan, KS Metropolitan Statistical Area
438
     Manhattan
                                                                           31740.0
    COUNTY_NAME COUNTY_CODE STATE_NAME
                                             STATE_CODE
                                                              ZIP
                                                                     LATITUDE
                                                          11206.0
99
           Kings
                          47.0
                                        NY
                                                      36
                                                                    40.710167
100
                           5.0
                                                          10467.0
                                                                    40.862386
           Bronx
                                        NY
                                                      36
101
           Bronx
                           5.0
                                        NY
                                                      36
                                                          10453.0
                                                                    40.853243
                                                                    41.797502
                                                      9
        Windham
                          15.0
                                        CT
                                                           6234.0
277
438
                                        KS
                                                      20
                                                          66502.0
                                                                    39.181496
           Riley
                         161.0
     LONGITUDE LOCATION_QUALITY PHA_CODE
99
    -73.945793
                                      NY005
                                 R
100 -73.865954
                                 R
                                      NY005
101 -73.912366
                                      NY005
                                 R
277 -71.888193
                                 4
                                      CT066
438 -96.563170
                                 R
                                      KS063
                                          PHA NAME
                                                    INSPECTION_SCORE
99
                New York City Housing Authority
                                                                    90
                New York City Housing Authority
New York City Housing Authority
100
                                                                    90
                                                                    94
101
     Housing Authority of the Town of Brooklyn
                                                                    93
277
                    Manhattan Housing Authority
438
                                                                    91
    INSPECTION_DATE
99
          2013-11-06
100
          2013-11-18
          2013-09-16
101
277
          2013-09-24
438
          2014-03-28
>>> # There are some states outside NY. O.K.
>>> maskNYC = scoreDF['STATE_NAME'].str.contains('NY')
>>> scoreDF = scoreDF[maskNYC]
>>> scoreDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 112 entries, 99 to 7247
Data columns (total 19 columns):
INSPECTION_ID
                      112 non-null int64
DEVELOPMENT ID
                      112 non-null object
DEVELOPMENT_NAME
                      112 non-null object
                      112 non-null object
ADDRESS
CITY
                      112 non-null object
CBSA NAME
                      112 non-null object
CBSA_CODE
                      112 non-null float64
COUNTY_NAME
COUNTY_CODE
                      112 non-null object
                     112 non-null float64
STATE_NAME
                      112 non-null object
                      112 non-null int64
STATE_CODE
                     112 non-null float64
112 non-null float64
ZIP
LATITUDE
LONGITUDE
                      112 non-null float64
                      112 non-null object
LOCATION_QUALITY
PHA_CODE
                      112 non-null object
                      112 non-null object
PHA NAME
INSPECTION_SCORE
                      112 non-null int64
INSPECTION_DATE
                     112 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 17.5+ KB
>>> scoreDF.head()
      INSPECTION_ID DEVELOPMENT_ID
                                             DEVELOPMENT NAME
gg
              507374
                         NY005000020
                                                 WILLIAMSBURG
              507385
                         NY005010390
                                               PELHAM PARKWAY
100
101
              507492
                         NY005013410
                                        UNIVERSITY AVE REHAB
2135
              537399
                         NY005011630
                                              WYCKOFF GARDENS
                                       GEN. CHARLES W. BERRY
              537401
                         NY005000520
2136
```

```
Brooklyn
          125 Ten Eyck St
100
           2440 Boston Rd
                                    Bronx
      1925 University Ave
101
                                    Bronx
2135
      487 Carlton Ave Apt
                                 Brooklyn
         1754 Richmond Rd Staten Island
2136
                                                CBSA_NAME CBSA_CODE
99
      New York-Jersey City-White Plains, NY-NJ Metro...
                                                             35614.0
100
      New York-Jersey City-White Plains, NY-NJ Metro...
                                                              35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
101
                                                             35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
2135
                                                             35614.0
2136 New York-Jersey City-White Plains, NY-NJ Metro...
                                                             35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME
                                           STATE_CODE
                                                            ZIP
                                                                   LATITUDE
99
           Kings
                          47.0
                                       NY
                                                    36
                                                        11206.0
                                                                  40.710167
                           5.0
100
                                       NY
                                                        10467.0
           Bronx
                                                    36
                                                                 40.862386
                                       NY
101
           Bronx
                           5.0
                                                    36
                                                        10453.0
                                                                  40.853243
                          47.0
                                                        11238.0
2135
                                       NY
                                                    36
                                                                 40.684186
           Kings
2136
                                                        10306.0
                                                                 40.587441
        Richmond
                          85.0
                                       NY
      LONGITUDE LOCATION_QUALITY PHA_CODE
99
     -73.945793
                                R
                                     NY005
                                            New York City Housing Authority
100
     -73.865954
                                R
                                     NY005
                                            New York City Housing Authority
                                            New York City Housing Authority
New York City Housing Authority
101
    -73.912366
                                R
                                     NY005
2135 -73.971034
                                4
                                     NY005
2136 -74.103256
                                R
                                     NY005
                                            New York City Housing Authority
      INSPECTION_SCORE INSPECTION_DATE
99
                             2013-11-06
                    90
100
                             2013-11-18
101
                     94
                             2013-09-16
                             2015-01-06
2135
                     81
                             2015-03-23
2136
                    86
>>> # There are 112 entries from a city/state search. Do a PHA_NAME search to
confirm entry count.
>>> nychaDF = pd.ExcelFile(xlFile)
>>> nychaDF = nychaDF.parse('June 2016 PH deelopment')
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7257 entries, 0 to 7256
Data columns (total 19 columns):
                    7257 non-null int64
INSPECTION_ID
                    7257 non-null object
DEVELOPMENT ID
DEVELOPMENT_NAME
                    7257 non-null object
ADDRESS
                    6773 non-null object
CITY
                    7257 non-null object
CBSA_NAME
                    6214 non-null object
CBSA_CODE
                    7253 non-null float64
                    7253 non-null object
COUNTY_NAME
COUNTY_CODE
                    7253 non-null float64
STATE NAME
                    7257 non-null object
STATE_CODE
                    7257 non-null int64
ZIP
                    7253 non-null float64
                    7253 non-null float64
LATITUDE
LONGITUDE
                    7253 non-null float64
LOCATION_QUALITY
                    7253 non-null object
PHA_CODE
                     7257 non-null object
PHA_NAME
                    7257 non-null object
INSPECTION_SCORE
                    7257 non-null int64
INSPECTION_DATE
                    7257 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 1.1+ MB
>>> maskNYCHA = nychaDF['PHA_NAME'].str.contains('New York City Housing
Authority')
>>> nychaDF = nychaDF[maskNYCHA]
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 159 entries, 99 to 7247
Data columns (total 19 columns):
                     159 non-null int64
INSPECTION_ID
DEVELOPMENT_ID
                    159 non-null object
DEVELOPMENT_NAME
                    159 non-null object
                    158 non-null object
ADDRESS
                     159 non-null object
CITY
CBSA_NAME
                    159 non-null object
```

```
CBSA_CODE
                    159 non-null float64
COUNTY_NAME
COUNTY_CODE
                    159 non-null object
                    159 non-null float64
STATE_NAME
                    159 non-null object
                    159 non-null int64
STATE_CODE
                    159 non-null float64
ZIP
                    159 non-null float64
LATITUDE
LONGITUDE
                    159 non-null float64
                    159 non-null object
LOCATION_QUALITY
PHA_CODE
                    159 non-null object
PHA NAME
                    159 non-null object
INSPECTION_SCORE
                    159 non-null int64
INSPECTION DATE
                    159 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 24.8+ KB
>>> # 159 entry count by NYCHA. Let's see why. What cities are included ?
. . .
>>> cityDistro = nychaDF['CITY'].value_counts()
>>> cityDistro
Brooklyn
                 51
New York
                 46
                 40
Bronx
Queens
                 14
Staten Island
                  6
Manhattan
                  1
NEW YORK
                  1
Name: CITY, dtype: int64
>>> # Not very consistent use of city names. We will go with this list.
>>> cols = ['INSPECTION SCORE']
>>> nychaDF[cols] = nychaDF[nychaDF[cols] > 60][cols]
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 159 entries, 99 to 7247
Data columns (total 19 columns):
INSPECTION ID
                    159 non-null int64
                    159 non-null object
DEVELOPMENT_ID
DEVELOPMENT_NAME
                    159 non-null object
                    158 non-null object
ADDRESS
CITY
                    159 non-null object
CBSA_NAME
                    159 non-null object
CBSA_CODE
                    159 non-null float64
COUNTY_NAME
                    159 non-null object
COUNTY_CODE
                    159 non-null float64
STATE_NAME
                    159 non-null object
                    159 non-null int64
STATE_CODE
ZIP
                    159 non-null float64
                    159 non-null float64
LATITUDE
LONGITUDE
                    159 non-null float64
                    159 non-null object
LOCATION_QUALITY
PHA_CODE
                    159 non-null object
                    159 non-null object
PHA NAME
INSPECTION_SCORE
                    136 non-null float64
INSPECTION_DATE
                    159 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(6), int64(2), object(10)
memory usage: 24.8+ KB
>>> # That did nothing.
>>> maskFail = nychaDF['INSPECTION_SCORE'] < 60
>>> nychaDF = nychaDF[maskFail]
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 0 entries
Data columns (total 19 columns):
INSPECTION_ID
                    0 non-null int64
DEVELOPMENT_ID
                    0 non-null object
DEVELOPMENT_NAME
                    0 non-null object
ADDRESS
                    0 non-null object
                    0 non-null object
CITY
CBSA_NAME
                    0 non-null object
CBSA_CODE
                    0 non-null float64
COUNTY_NAME
                    0 non-null object
COUNTY_CODE
                    0 non-null float64
STATE_NAME
                    0 non-null object
STATE_CODE
                    0 non-null int64
ZIP
                    0 non-null float64
```

```
LATITUDE
                    0 non-null float64
LONGITUDE
                    0 non-null float64
                    0 non-null object
LOCATION_QUALITY
PHA_CODE
                    0 non-null object
                    0 non-null object
PHA_NAME
INSPECTION_SCORE
                    0 non-null float64
                    0 non-null datetime64[ns]
INSPECTION_DATE
dtypes: datetime64[ns](1), float64(6), int64(2), object(10)
memory usage: 0.0+ bytes
>>> # Grrr.
>>> nychaDF = pd.ExcelFile(xlFile)
>>> nychaDF = nychaDF.parse('June 2016 PH deelopment')
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7257 entries, 0 to 7256
Data columns (total 19 columns):
                    7257 non-null int64
INSPECTION_ID
DEVELOPMENT_ID
                    7257 non-null object
DEVELOPMENT_NAME
                    7257 non-null object
ADDRESS
                    6773 non-null object
                    7257 non-null object
CITY
CBSA_NAME
                    6214 non-null object
CBSA_CODE
                    7253 non-null float64
COUNTY_NAME
                    7253 non-null object
COUNTY CODE
                    7253 non-null float64
                    7257 non-null object
STATE_NAME
                    7257 non-null int64
7253 non-null float64
STATE_CODE
ZIP
                    7253 non-null float64
LATITUDE
LONGITUDE
                    7253 non-null float64
LOCATION_QUALITY
                    7253 non-null object
                    7257 non-null object
PHA_CODE
                    7257 non-null object
PHA_NAME
INSPECTION_SCORE
                    7257 non-null int64
INSPECTION_DATE
                    7257 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 1.1+ MB
>>> maskNYCHA = nychaDF['PHA_NAME'].str.contains('New York City Housing
Authority')
>>> nychaDF = nychaDF[maskNYCHA]
>>> nychaDF.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 159 entries, 99 to 7247
Data columns (total 19 columns):
INSPECTION_ID
                    159 non-null int64
DEVELOPMENT_ID
                    159 non-null object
                    159 non-null object
DEVELOPMENT_NAME
ADDRESS
                    158 non-null object
                    159 non-null object
CITY
CBSA_NAME
                    159 non-null object
                    159 non-null float64
CBSA_CODE
COUNTY_NAME
                    159 non-null object
                    159 non-null float64
COUNTY_CODE
STATE_NAME
                    159 non-null object
STATE_CODE
                    159 non-null int64
ZIP
                    159 non-null float64
LATITUDE
                    159 non-null float64
                    159 non-null float64
LONGITUDE
LOCATION_QUALITY
                    159 non-null object
                    159 non-null object
PHA_CODE
PHA_NAME
                    159 non-null object
INSPECTION SCORE
                    159 non-null int64
INSPECTION_DATE
                    159 non-null datetime64[ns]
dtypes: daTetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 24.8+ KB
>>> nychaFail = nychaDF.sort('INSPECTION_SCORE', ascending=False)
 _main__:1: FutureWarning: sort(columns=....) is deprecated, use
sort_values(by=....)
>>> nychaFail.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 159 entries, 2139 to 6153
Data columns (total 19 columns):
INSPECTION_ID
                    159 non-null int64
DEVELOPMENT_ID
                    159 non-null object
DEVELOPMENT_NAME
                    159 non-null object
```

```
158 non-null object
                       159 non-null object
CITY
CBSA NAME
                      159 non-null object
CBSA_CODE
                       159 non-null float64
COUNTY_NAME
COUNTY_CODE
                       159 non-null object
                       159 non-null float64
STATE NAME
                      159 non-null object
STATE_CODE
                      159 non-null int64
                      159 non-null float64
159 non-null float64
ZIP
LATITUDE
LONGITUDE
                      159 non-null float64
LOCATION_QUALITY
                       159 non-null object
PHA CODE
                       159 non-null object
PHA_NAME
                       159 non-null object
INSPECTION SCORE
                       159 non-null int64
INSPECTION_DATE
                       159 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 24.8+ KB
>>> nychaFail.head()
      INSPECTION_ID DEVELOPMENT_ID
                                             DEVELOPMENT_NAME
                                                                               ADDRESS
                                                                         154 W 84th St
                                          LOWER EAST SIDE III
2139
               537407
                          NY005013590
2155
               537462
                          NY005021400
                                                  INDEPENDENCE
                                                                     130 Clymer St Apt
                                        LANGSTON HUGHES APTS
2147
               537438
                          NY005011680
                                                                         393 Powell St
                                         UNIVERSITY AVE REHAB
STUYVESANT GARDENS I
101
               507492
                          NY005013410
                                                                  1925 University Ave
               537429
                                                                   150 Malcolm X Blvd
2144
                          NY005012210
           CITY
                                                                CBSA_NAME CBSA_CODE
                  New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
2139
      New York
                                                                               35614.0
2155
      Brooklyn
                                                                               35614.0
2147
                  New York-Jersey City-White Plains, NY-NJ Metro...
      Brooklyn
                                                                               35614.0
      Bronx New York-Jersey City-White Plains, NY-NJ Metro...
Brooklyn New York-Jersey City-White Plains, NY-NJ Metro...
101
                                                                               35614.0
2144
                                                                               35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME STATE_CODE
                                                                  ZIP
                                                                         LATITUDE
                            61.0
                                                              10024.0
                                                                        40.785736
2139
         New York
                                           NY
                                                         36
2155
            Kings
                            47.0
                                           NY
                                                         36
                                                              11249.0
                                                                        40.705907
2147
            Kings
                            47.0
                                           NY
                                                         36
                                                              11212.0
                                                                        40.664412
                                                                        40.853243
101
            Bronx
                             5.0
                                           NY
                                                         36
                                                              10453.0
2144
            Kings
                            47.0
                                           NY
                                                         36
                                                              11221.0
                                                                        40.687762
      LONGITUDE LOCATION_QUALITY PHA_CODE
                                                                            PHA_NAME
                                                 New York City Housing Authority
                                         NY005
2139 -73.974924
                                   R
2155 -73.964634
                                   4
                                         NY005
                                                 New York City Housing Authority
                                                 New York City Housing Authority
2147 -73.902400
                                   R
                                         NY005
101 -73.912366
                                   R
                                         NY005
                                                 New York City Housing Authority
                                   R
                                         NY005
                                                 New York City Housing Authority
2144 -73.930249
       INSPECTION_SCORE INSPECTION_DATE
2139
                       97
                                2015-02-09
2155
                       96
                                2015-01-21
                                2015-01-12
2147
                       94
101
                       94
                                2013-09-16
2144
                       94
                                2015-01-20
>>> nychaFail.tail()
      INSPECTION_ID DEVELOPMENT_ID
                                            DEVELOPMENT_NAME
                                                                             ADDRESS
                          NY005020810
                                               MANHATTANVILLE
                                                                 1430 Amsterdam Ave
5270
               559662
                          NY005011310
5231
               558193
                                                      TOMPKINS
                                                                        760 Park Ave
               558170
                          NY005010360
                                                      NOSTRAND
                                                                 2263 Batchelder St
5211
                                                                 383 E 141st St Apt
               558150
                          NY005001210
                                                   MOTT HAVEN
5191
6153
               565962
                          NY005000240 LESTER W. PATTERSON
                                                                      281 E 143rd St
           CITY
                                                                CBSA_NAME CBSA_CODE
5270
      New York
                  New York-Jersey City-White Plains, NY-NJ Metro...
                                                                               35614.0
                 New York-Jersey City-White Plains, NY-NJ Metro...
5231
      Brooklyn
                                                                               35614.0
5211
      Brooklyn
                                                                               35614.0
5191
          Bronx
                                                                               35614.0
6153
                                                                               35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME
                                                STATE CODE
                                                                  ZIP
                                                                         LATITUDE
         New York
5270
                                                              10027.0
                            61.0
                                           NY
                                                         36
                                                                        40.816486
5231
            Kings
                                                              11206.0
                            47.0
                                           NY
                                                         36
                                                                        40.697965
                                                              11229.0
5211
                            47.0
                                           NY
                                                         36
                                                                        40.597321
            Kings
5191
                                           NY
                                                         36
                                                              10454.0
                                                                        40.811491
            Bronx
                             5.0
                                                         36 10451.0
6153
                                                                        40.814665
                             5.0
                                           NY
            Bronx
                                                                            PHA_NAME \
      LONGITUDE LOCATION_QUALITY PHA_CODE
```

\

ADDRESS

```
NY005
5270 -73.954260
                                   R
                                                 New York City Housing Authority
                                                 New York City Housing Authority
New York City Housing Authority
5231 -73.944942
                                   R
                                         NY005
5211 -73.938161
                                   R
                                         NY005
5191 -73.922498
                                   4
                                         NY005
                                                 New York City Housing Authority
                                   R
                                         NY005
                                                 New York City Housing Authority
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5252
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5180
              558138
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                                                              RED HOOK II
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                          NY005000790
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                                                     OCEAN BAY (BAYSIDE)
              558137
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                                                               VAN DYKE I
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              558177
                          NY005010670
                                        JUSTICE SONIA SOTOMAYOR HOUSES
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                                                     POLO GROUNDS TOWERS
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              558158
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              558151
                          NY005001230
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                                                     LESTER W. PATTERSON
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5273
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                                Queens
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                                                                      40.597321
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5229 -73.939407
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5270 -73.954260
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                                        NY005
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5211 -73.938161
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                                        NY005
5191 -73.922498
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                                                New York City Housing Authority
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6153 -73.924180
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>>> nychaFail.tail(20)
       INSPECTION_ID DEVELOPMENT_ID
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               558218
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               558145
                           NY005000790
                                                                 RED HOOK II
5186
                                                       OCEAN BAY (BAYSIDE)
               558189
                           NY005010980
5227
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               558137
                           NY005000610
                                                                  VAN DYKE I
                                          JUSTICE SONIA SOTOMAYOR HOUSES
5218
               558177
                           NY005010670
5194
               558153
                           NY005001490
                                                       POLO GROUNDS TOWERS
5199
               558158
                           NY005005140
                                                                      WHITMAN
5253
               558224
                           NY005020950
                                                                       LINDEN
                                                 UNION AVE/E 163RD SITE 5
ROBERT FULTON
5854
               565547
                           NY005013420
               558152
5193
                           NY005001360
               558151
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                                                            DE WITT CLINTON
5192
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5272
                           NY005020830
                                                                    MARLBORO
5229
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                                                         PS 139 RENAISSANCE
               559660
                           NY005011720
                                                                   GRAVESEND
5268
                                                             MANHATTANVILLE
5270
               559662
                           NY005020810
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5231
               558193
                                                                     TOMPKINS
                           NY005010360
5211
               558170
                                                                    NOSTRAND
                                                                  MOTT HAVEN
               558150
                           NY005001210
5191
               565962
                           NY005000240
                                                       LESTER W. PATTERSON
6153
                  ADDRESS
                                   CITY
        550 Cauldwell Ave
                                  Bronx
5250
5180
            1839 Fulton St
                              Brooklyn
5186
              82 Dwight St
                              Brooklyn
        441 Beach 51st St
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                                 Queens
5179
            414 Sutter Ave
                              Brooklyn
            2125 Glebe Ave
5218
                                  Bronx
5194
              2931 8th Ave
                              New York
5199
        117 N Oxford Walk
                              Brooklyn
5253
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                              Brooklyn
5854
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                                  Bronx
             418 W 17th St
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5193
                              New York
       1760 Lexington Ave
5192
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            120 W 140th St
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            2950 W 35th St
                              Brooklyn
5270
       1430 Amsterdam Ave
                              New York
5231
              760 Park Ave
                              Brooklyn
5211
       2263 Batchelder St
                              Brooklyn
5191
       383 E 141st St Apt
                                  Bronx
6153
            281 E 143rd St
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5211 New York-Jersey City-White Plains, NY-NJ Metro...
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5227 -73.782176
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5231
                              2015-12-15
5211
                     43
                              2015-12-24
5191
                     42
                              2015-11-16
6153
                     33
                              2016-02-22
>>> df = nychaFail[nychaFail.tail(20)]
Traceback (most recent call last):
   File "<stdin>", line 1, in <module>
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-packages/pandas/core/frame.py",
line 2055, in __getitem_
    return self._getitem_frame(key)
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-packages/pandas/core/frame.py",
line 2130, in _getitem_frame
```

5191 New York-Jersey City-White Plains, NY-NJ Metro...

35614.0

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ValueError: Must pass DataFrame with boolean values only
>>> df = nychaFail.tail(20)
>>> df.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 20 entries, 5250 to 6153
Data columns (total 19 columns):
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DEVELOPMENT_ID
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DEVELOPMENT_NAME
                      20 non-null object
ADDRESS
                      20 non-null object
CITY
                      20 non-null object
                      20 non-null object
20 non-null float64
CBSA NAME
CBSA_CODE
COUNTY NAME
                      20 non-null object
COUNTY_CODE
                      20 non-null float64
STATE_NAME
                      20 non-null object
                      20 non-null int64
STATE_CODE
ZIP
                      20 non-null float64
LATTTUDE
                      20 non-null float64
LONGITUDE
                      20 non-null float64
                      20 non-null object
LOCATION_QUALITY
PHA_CODE
                      20 non-null object
                      20 non-null object
20 non-null int64
PHA NAME
INSPECTION_SCORE
INSPECTION DATE
                      20 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 3.1+ KB
>>> df.head()
      INSPECTION ID DEVELOPMENT ID
                                           DEVELOPMENT NAME
                                                                         ADDRESS
                                          SAINT MARY'S PARK
                                                               550 Cauldwell Ave
5250
              558218
                         NY005020930
              558138
                         NY005000650
                                                    BREVOORT
                                                                  1839 Fulton St
5180
                                                                    82 Dwight St
5186
              558145
                         NY005000790
                                                RED HOOK II
5227
              558189
                         NY005010980
                                        OCEAN BAY (BAYSIDE)
                                                               441 Beach 51st St
                                                                  414 Sutter Ave
5179
              558137
                         NY005000610
                                                 VAN DYKE I
                                                              CBSA_NAME
                                                                          CBSA CODE
           CITY
5250
          Bronx
                 New York-Jersey City-White Plains, NY-NJ Metro...
                                                                            35614.0
                 New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5180
      Brooklyn
                                                                            35614.0
5186
      Brooklyn
                                                                            35614.0
                 New York-Jersey City-White Plains, NY-NJ Metro...
5227
        Queens
                                                                            35614.0
      Brooklyn New York-Jersey City-White Plains, NY-NJ Metro...
5179
                                                                            35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME
                                              STATE_CODE
                                                                ZIP
                                                                       LATITUDE
5250
            Bronx
                            5.0
                                                           10455.0
                                                                      40.814739
                                                       36
                           47.0
                                                           11233.0
5180
                                          NY
                                                       36
            Kinas
                                                                     40.679268
5186
            Kings
                           47.0
                                          NY
                                                            11231.0
                                                                      40.676398
                                                       36
           Queens
                                                                     40.596459
5227
                           81.0
                                          NY
                                                       36
                                                            11691.0
                                                       36
5179
                           47.0
                                          NY
                                                            11212.0
                                                                     40.667951
            Kings
      LONGITUDE LOCATION_QUALITY PHA_CODE
                                                                         PHA_NAME
5250 -73.910338
                                  R
                                       NY005
                                               New York City Housing Authority
5180 -73.925917
                                  R
                                       NY005
                                               New York City Housing Authority
                                               New York City Housing Authority
New York City Housing Authority
5186 -74.008879
                                  R
                                       NY005
5227 -73.782176
                                  R
                                       NY005
5179 -73.903626
                                               New York City Housing Authority
                                  R
                                       NY005
      INSPECTION_SCORE INSPECTION_DATE
5250
                               2015-11-10
                      59
5180
                      58
                               2015-11-30
5186
                      58
                               2015-12-15
5227
                      58
                               2015-12-08
5179
                      57
                               2015-11-16
>>> df.tail()
      INSPECTION_ID DEVELOPMENT_ID
                                           DEVELOPMENT NAME
                                                                          ADDRESS
                                                                                     ١
5270
              559662
                         NY005020810
                                             MANHATTANVILLE
                                                               1430 Amsterdam Ave
5231
              558193
                         NY005011310
                                                    TOMPKINS
                                                                     760 Park Ave
                                                    NOSTRAND
5211
              558170
                         NY005010360
                                                               2263 Batchelder St
5191
              558150
                         NY005001210
                                                 MOTT HAVEN
                                                               383 E 141st St Apt
                                                                   281 E 143rd St
              565962
                         NY005000240 LESTER W. PATTERSON
6153
                                                              CBSA_NAME CBSA_CODE
           CITY
                 New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5270
      New York
                                                                            35614.0
      Brooklyn
                                                                            35614.0
5231
5211
                 New York-Jersey City-White Plains, NY-NJ Metro...
      Brooklyn
                                                                            35614.0
5191
                 New York-Jersey City-White Plains, NY-NJ Metro...
                                                                            35614.0
          Bronx
```

raise ValueError('Must pass DataFrame with boolean values only')

6153	565962 NY	005000240	
	ADDRESS	CITY	\
5250	550 Cauldwell Ave	Bronx	
5180	1839 Fulton St	Brooklyn	
5186	82 Dwight St	Brooklyn	

558193

558170

558150

5231

5211

5191

NY005011310

NY005010360

NY005001210

TOMPKINS

NOSTRAND

MOTT HAVEN

LESTER W. PATTERSON

```
5179
           414 Sutter Ave
                              Brooklyn
           2125 Glebe Ave
5218
                                 Bronx
5194
              2931 8th Ave
                              New York
5199
        117 N Oxford Walk
                              Brooklyn
5253
           215 Cozine Ave
                              Brooklyn
            950 Union Ave
5854
                                Bronx
5193
            418 W 17th St
                              New York
                              New York
5192
      1760 Lexington Ave
5272
               29 Avenue W
                              Brooklyn
           120 W 140th St
5229
                              New York
           2950 W 35th St
5268
                              Brooklyn
5270
      1430 Amsterdam Ave
                              New York
              760 Park Ave
5231
                              Brooklyn
5211
       2263 Batchelder St
                              Brooklyn
      383 E 141st St Apt
5191
                                 Bronx
           281 E 143rd St
6153
                                 Bronx
                                                     CBSA_NAME
                                                                  CBSA_CODE
      New York-Jersey City-White Plains, NY-NJ Metro...
                                                                    35614.0
5250
      New York-Jersey City-White Plains, NY-NJ Metro...
5180
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
5186
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
5227
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5179
                                                                    35614.0
5218
                                                                    35614.0
5194
      New York-Jersey City-White Plains, NY-NJ Metro...
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
5199
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5253
                                                                    35614.0
5854
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
5193
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5192
                                                                    35614.0
5272
                                                                    35614.0
5229
                                                                    35614.0
5268
      New York-Jersey City-White Plains, NY-NJ Metro...
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5270
                                                                    35614.0
5231
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
5211
                                                                    35614.0
      New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
5191
                                                                    35614.0
6153
                                                                    35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME
                                                STATE_CODE
                                                                   ZIP
                                                                          LATITUDE
5250
                              5.0
                                                             10455.0
            Bronx
                                           NY
                                                          36
                                                                         40.814739
                             47.0
5180
            Kings
                                            NY
                                                          36
                                                              11233.0
                                                                         40.679268
                                                              11231.0
5186
                            47.0
                                           NY
                                                                         40.676398
            Kings
                                                          36
                                            NY
                                                              11691.0
                                                                         40.596459
5227
           Queens
                             81.0
                                                          36
            Kings
                            47.0
                                           NY
                                                              11212.0
                                                                         40.667951
5179
                                                          36
5218
                             5.0
                                           NY
                                                          36
                                                              10462.0
                                                                         40.835042
            Bronx
                                                          36
                                                              10039.0
5194
         New York
                             61.0
                                           NY
                                                                         40.830670
5199
            Kings
                             47.0
                                            NY
                                                          36
                                                             11205.0
                                                                         40.694668
                                                              11207.0
5253
                            47.0
                                           NY
                                                          36
                                                                         40.655646
            Kings
5854
            Bronx
                             5.0
                                           NY
                                                          36
                                                              10459.0
                                                                         40.822692
                                                              10011.0
5193
         New York
                            61.0
                                           NY
                                                          36
                                                                         40.742983
5192
         New York
                            61.0
                                           NY
                                                          36
                                                              10029.0
                                                                         40.794331
5272
            Kings
                            47.0
                                           NY
                                                          36
                                                              11223.0
                                                                         40.591368
5229
         New York
                            61.0
                                           NY
                                                          36
                                                              10030.0
                                                                         40.817457
5268
            Kings
                             47.0
                                           NY
                                                          36
                                                              11224.0
                                                                         40.574198
                                                              10027.0
5270
         New York
                             61.0
                                           NY
                                                          36
                                                                         40.816486
                                                              11206.0
5231
            Kings
                             47.0
                                            NY
                                                          36
                                                                         40.697965
                                                              11229.0
5211
                             47.0
                                           NY
                                                          36
                                                                         40.597321
            Kinas
                                                              10454.0
5191
                                            NY
                                                                         40.811491
            Bronx
                              5.0
                                                          36
6153
            Bronx
                              5.0
                                           NY
                                                          36
                                                              10451.0
                                                                         40.814665
      LONGITUDE LOCATION_QUALITY PHA_CODE
                                                                            PHA NAME
5250 -73.910338
                                    R
                                         NY005
                                                 New York City Housing Authority
5180 -73.925917
                                    R
                                         NY005
                                                 New York City Housing Authority
5186 -74.008879
                                                 New York City Housing Authority
                                    R
                                         NY005
                                                 New York City Housing Authority
5227 -73.782176
                                    R
                                         NY005
                                                 New York City Housing Authority
5179 -73.903626
                                    R
                                         NY005
                                                 New York City Housing Authority
New York City Housing Authority
5218 -73.850561
                                    R
                                         NY005
5194 -73.936477
                                   R
                                         NY005
5199 -73.975223
                                                 New York City Housing Authority
                                         NY005
5253 -73.884266
                                   R
                                         NY005
                                                 New York City Housing Authority
5854 -73.901647
                                   R
                                         NY005
                                                 New York City Housing Authority
                                                 New York City Housing Authority
5193 -74.004700
                                   R
                                         NY005
5192 -73.944991
                                   R
                                         NY005
                                                 New York City Housing Authority
                                   R
5272 -73.983861
                                         NY005
                                                 New York City Housing Authority
```

441 Beach 51st St

Oueens

```
NY005
5229 -73.939407
                                 R
                                              New York City Housing Authority
                                              New York City Housing Authority
New York City Housing Authority
5268 -74.000773
                                       NY005
5270 -73.954260
                                 R
                                      NY005
                                              New York City Housing Authority
5231 -73.944942
                                 R
                                       NY005
                                 R
                                       NY005
                                              New York City Housing Authority
5211 -73.938161
5191 -73.922498
                                 4
                                       NY005
                                              New York City Housing Authority
6153 -73.924180
                                              New York City Housing Authority
                                 R
                                      NY005
      INSPECTION_SCORE INSPECTION_DATE
5250
                     59
                              2015-11-10
5180
                      58
                              2015-11-30
5186
                     58
                              2015-12-15
5227
                     58
                              2015-12-08
5179
                     57
                              2015-11-16
5218
                     57
                              2015-10-27
5194
                     57
                              2015-09-21
                     56
                              2015-11-09
5199
                              2015-12-16
5253
                     56
5854
                     56
                              2015-12-08
5193
                     55
                              2015-11-17
5192
                     55
                              2015-11-25
                     54
                              2015-11-16
5272
5229
                     54
                              2015-12-08
5268
                     52
                              2015-11-16
                              2015-11-30
5270
                     49
                     45
                              2015-12-15
5231
5211
                     43
                              2015-12-24
5191
                     42
                              2015-11-16
                              2016-02-22
6153
                     33
>>> # save df as Excel file, populate TDS codes, then reprocess file for tdslut
merge to x-ref with First FOIL Response csv file for stats.
>>> pd.DataFrame(df).to_excel('nychaFail-raw.xlsx', index=True)
>>> # add DEVELOPMENT_ID to tdslut file, as a back-up for x-ref purposes.
>>> tdsfile = r'/Applications/nychatest/NYCHATDSManual.xlsx'
>>> dtslut = pd.ExcelFile(tdsfile)
>>> tdslut = tdslut.parse('Sheet1')
Traceback (most recent call last):
  File "<stdin>"
File "<stdin>", line 1, in <module>
NameError: name 'tdslut' is not defined
>>> dtslut = dtslut.parse('Sheet1')
>>> tdslut = dtslut
>>> tdslut['TDS'] = tdslut['TDS'].apply(lambda x: '{0:0>5}'.format(x))
>>> tdslut['TDS_ID'] = tdslut.TDS.str[:3]
>>> tdslut.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 360 entries, 0 to 359
Data columns (total 15 columns):
                    360 non-null object
TDS
COMPLEX
                    360 non-null object
                    349 non-null object
BOROUGH
DEVELOPMENT_EDP
                    334 non-null float64
OPERATING EDP
                    0 non-null float64
DEVELOPMENT_NY
                    25 non-null object
UNITS
                    339 non-null float64
BIN
                    0 non-null float64
                    0 non-null float64
0 non-null float64
М
SH
ADDRESS
                    0 non-null float64
                    0 non-null float64
7TP
FACILITY
                    0 non-null float64
AMP
                    26 non-null object
TDS_ID
                    360 non-null object
dtypes: float64(9), object(6)
memory usage: 42.3+ KB
>>> tdslut = tdslut[tdslut.AMP.notnull()]
>>> tdslut.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 26 entries, 41 to 331
Data columns (total 15 columns):
TDS
                    26 non-null object
COMPLEX
                    26 non-null object
BOROUGH
                    26 non-null object
DEVELOPMENT_EDP
                    26 non-null float64
OPERATING_EDP
                    0 non-null float64
```

```
DEVELOPMENT_NY
                    25 non-null object
                    26 non-null float64
UNITS
                    0 non-null float64
BTN
                    0 non-null float64
                    0 non-null float64
SH
ADDRESS
                    0
                      non-null float64
                    0 non-null float64
7<sub>TP</sub>
FACILITY
                    0 non-null float64
                    26 non-null object
AMP
TDS_ID
                    26 non-null object
dtypes: float64(9), object(6)
memory usage: 3.2+ KB
>>> tdslut.head()
               COMPLEX
                           B0R0UGH
                                    DEVELOPMENT_EDP
       TDS
                                                       OPERATING EDP
              BREVOORT
41
     065.0
                          BROOKLYN
                                               213.0
                                                                  NaN
66
     123.0
               CLINTON
                        MANHATTAN
                                               245.0
                                                                  NaN
     136.0
                FULTON
                        MANHATTAN
                                               252.0
                                                                  NaN
115
     068.0
            GRAVESEND
                         BROOKI YN
                                               225.0
                                                                  NaN
124
166
     095.0
                LINDEN
                          BROOKLYN
                                               672.0
                                                                  NaN
    DEVELOPMENT NY
                      UNITS
                              BIN
                                    M SH
                                            ADDRESS
                                                      ZIP
                                                           FACILITY
                                                                               AMP
41
          NY005017
                      896.0
                              NaN NaN NaN
                                                NaN
                                                                      NY005000650
                                                      NaN
                                                                 NaN
66
          NY005045
                      749.0
                              NaN NaN NaN
                                                NaN
                                                      NaN
                                                                 NaN
                                                                      NY005001230
115
          NY005053
                      944.0
                              NaN NaN NaN
                                                NaN
                                                      NaN
                                                                 NaN
                                                                      NY005001360
124
          NY005025
                      634.0
                              NaN NaN NaN
                                                NaN
                                                      NaN
                                                                 NaN
                                                                      NY005011720
166
          NY005377
                     1586.0
                             NaN NaN NaN
                                                NaN
                                                      NaN
                                                                 NaN
                                                                      NY005020950
    TDS ID
41
       065
       123
66
115
       136
       068
124
166
       095
   tdslut.head(10)
       TDS
                                      COMPLEX
                                                 BOROUGH DEVELOPMENT_EDP
41
     065.0
                                     BREVOORT
                                                 BROOKLYN
                                                                      213.0
66
     123.0
                                      CLINTON
                                               MANHATTAN
                                                                      245.0
115
     136.0
                                       FULTON
                                               MANHATTAN
                                                                      252.0
124
     068.0
                                   GRAVESEND
                                                 BROOKLYN
                                                                      225.0
166
     095.0
                                       LINDEN
                                                 BR00KLYN
                                                                      672.0
                              MANHATTANVILLE
174
     081.0
                                               MANHATTAN
                                                                      429.0
            MANHATTANVILLE REHAB (GROUP 2)
175
     296.0
                                               MANHATTAN
                                                                      557.0
            MANHATTANVILLE REHAB (GROUP 3)
176
     297.0
                                               MANHATTAN
                                                                      558.0
182
     083.0
                                    MARL BORO
                                                BROOKLYN
                                                                      426.0
199
     121.0
                                  MOTT HAVEN
                                                    BRONX
                                                                      244.0
     OPERATING_EDP DEVELOPMENT_NY
                                       UNITS
                                              BIN
                                                       SH
                                                            ADDRESS
                                                                      ZIP
                                                     М
41
                NaN
                                       896.0
                                              NaN NaN NaN
                                                                      NaN
                           NY005017
                                                                 NaN
66
                NaN
                           NY005045
                                       749.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
115
                NaN
                           NY005053
                                       944.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
124
                NaN
                           NY005025
                                       634.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
166
                NaN
                           NY005377
                                      1586.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
                                                                      NaN
174
                NaN
                           NY005378
                                      1272.0
                                              NaN NaN NaN
                                                                 NaN
175
                NaN
                           NY005235
                                        46.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
                                              NaN NaN NaN
176
                NaN
                           NY005236
                                        51.0
                                                                 NaN
                                                                      NaN
182
                NaN
                           NY005380
                                      1765.0
                                              NaN NaN NaN
                                                                 NaN
                                                                      NaN
                           NY005044
                                       993.0
                                                                 NaN
199
                NaN
                                              NaN NaN NaN
                                                                      NaN
     FACILITY
                        AMP TDS ID
41
                NY005000650
                                065
          NaN
          NaN
                NY005001230
66
                                123
115
          NaN
                NY005001360
                                136
124
          NaN
                NY005011720
                                068
166
          NaN
                NY005020950
                                095
174
          NaN
                NY005020810
                                081
175
          NaN
                NY005010810
                                296
176
          NaN
                NY005010810
                                297
          NaN
                NY005020830
                                083
182
199
          NaN
                NY005001210
                                121
>>> tdslut.head(13)
       TDS
                                        COMPLEX
                                                    BOROUGH
                                                             DEVELOPMENT_EDP
     065.0
                                       BRFV00RT
                                                   BROOKLYN
                                                                        213.0
41
     123.0
                                        CLINTON
                                                 MANHATTAN
                                                                         245.0
66
     136.0
                                         FULTON
                                                 MANHATTAN
                                                                        252.0
115
124
     068.0
                                      GRAVESEND
                                                   BROOKLYN
                                                                         225.0
166
     095.0
                                         LINDEN
                                                   BROOKLYN
                                                                        672.0
```

```
174
     081.0
                                 MANHATTANVILLE
                                                  MANHATTAN
                                                                         429.0
175
     296.0
               MANHATTANVILLE REHAB (GROUP 2)
                                                  MANHATTAN
                                                                          557.0
               MANHATTANVILLE REHAB (GROUP 3)
     297.0
176
                                                  MANHATTAN
                                                                         558.0
                                                   BROOKLYN
182
     083.0
                                       MARLBORO
                                                                          426.0
                                     MOTT HAVEN
199
     121.0
                                                       BRONX
                                                                         244.0
203
     043.0
                                       NOSTRAND
                                                   BROOKLYN
                                                                          585.0
               OCEAN BAY APARTMENTS (BAYSIDE)
204
     098.0
                                                      OUFFNS
                                                                          571.0
205
     051.0
             OCEAN BAY APARTMENTS (OCEANSIDE)
                                                      QUEENS
                                                                         573.0
     OPERATING_EDP DEVELOPMENT_NY
                                       UNITS
                                               BIN
                                                      М
                                                         SH
                                                             ADDRESS
                                                                       ZIP
41
                NaN
                           NY005017
                                       896.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
66
                NaN
                           NY005045
                                       749.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
115
                NaN
                           NY005053
                                       944.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                                       634.0
                NaN
                                               NaN NaN NaN
124
                           NY005025
                                                                  NaN
                                                                       NaN
166
                NaN
                           NY005377
                                      1586.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                           NY005378
                                               NaN NaN NaN
                                                                       NaN
174
                NaN
                                                                  NaN
                                      1272.0
                                               NaN NaN NaN
175
                NaN
                           NY005235
                                        46.0
                                                                  NaN
                                                                       NaN
                                               NaN NaN NaN
176
                NaN
                           NY005236
                                        51.0
                                                                 NaN
                                                                       NaN
182
                NaN
                           NY005380
                                      1765.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                                       993.0
                                               NaN NaN NaN
                                                                  NaN
199
                NaN
                           NY005044
                                                                       NaN
203
                NaN
                          NY005268C
                                      1148.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                                               NaN NaN NaN
                                                                 NaN
204
                NaN
                          NY005244D
                                      1395.0
                                                                       NaN
205
                NaN
                          NY005244F
                                       418.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
     FACILITY
                         AMP TDS_ID
41
          NaN
                NY005000650
                                 065
                NY005001230
66
          NaN
                                 123
115
          NaN
                NY005001360
                                 136
124
          NaN
                NY005011720
                                 068
166
          NaN
                NY005020950
                                 095
174
          NaN
                NY005020810
                                 081
175
          NaN
                NY005010810
                                 296
176
          NaN
                NY005010810
                                 297
182
          NaN
                NY005020830
                                 083
199
          NaN
                NY005001210
                                 121
203
          NaN
                NY005010360
                                 043
204
                NY005010980
                                 098
          NaN
205
          NaN
                NY005010980
                                 051
   tdslut = tdslut[tdslut.TDS_ID != '051']
>>>
    tdslut.head(13)
       TDS
                                      COMPLEX
                                                  BOROUGH
                                                            DEVELOPMENT_EDP
                                                 BROOKLYN
                                     BREVOORT
41
     065.0
                                                                       213.0
     123.0
                                                                       245.0
66
                                      CLINTON
                                                MANHATTAN
115
     136.0
                                       FULTON
                                                MANHATTAN
                                                                       252.0
124
                                    GRAVESEND
     068.0
                                                 BROOKLYN
                                                                       225.0
     095.0
166
                                       LINDEN
                                                 BROOKLYN
                                                                       672.0
     081.0
                              MANHATTANVILLE
                                                MANHATTAN
174
                                                                       429.0
            MANHATTANVILLE REHAB (GROUP 2)
175
     296.0
                                                MANHATTAN
                                                                       557.0
176
     297.0
             MANHATTANVILLE REHAB (GROUP 3)
                                                MANHATTAN
                                                                       558.0
                                     MARLBORO
182
     083.0
                                                 BROOKI YN
                                                                       426.0
199
     121.0
                                   MOTT HAVEN
                                                    BRONX
                                                                       244.0
203
     043.0
                                     NOSTRAND
                                                 BROOKLYN
                                                                       585.0
204
     098.0
             OCEAN BAY APARTMENTS (BAYSIDE)
                                                   OUEENS
                                                                       571.0
213
     024.0
                                    PATTERSON
                                                    BRONX
                                                                       522.0
     OPERATING_EDP DEVELOPMENT_NY
                                       UNITS
                                               BIN
                                                      М
                                                         SH
                                                             ADDRESS
                                                                       7TP
                                       896.0
41
                                               NaN NaN NaN
                NaN
                           NY005017
                                                                 NaN
                                                                       NaN
                NaN
                                       749.0
                                               NaN NaN NaN
66
                           NY005045
                                                                  NaN
                                                                       NaN
                                       944.0
                                               NaN NaN NaN
115
                NaN
                           NY005053
                                                                  NaN
                                                                       NaN
                                       634.0
124
                                               NaN NaN NaN
                                                                  NaN
                NaN
                           NY005025
                                                                       NaN
166
                                      1586.0
                                               NaN NaN NaN
                NaN
                           NY005377
                                                                 NaN
                                                                       NaN
174
                NaN
                           NY005378
                                      1272.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                                        46.0
175
                NaN
                           NY005235
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
176
                NaN
                           NY005236
                                        51.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
182
                NaN
                           NY005380
                                      1765.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
199
                NaN
                           NY005044
                                       993.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
203
                NaN
                          NY005268C
                                      1148.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
                                      1395.0
                                                                 NaN
204
                NaN
                          NY005244D
                                               NaN NaN NaN
                                                                       NaN
213
                NaN
                          NY005216A
                                      1791.0
                                               NaN NaN NaN
                                                                  NaN
                                                                       NaN
     FACILITY
                         AMP TDS ID
41
                NY005000650
                                 065
          NaN
                NY005001230
          NaN
                                 123
66
115
          NaN
                NY005001360
                                 136
124
          NaN
                NY005011720
                                 068
166
          NaN
                                 095
                NY005020950
```

```
NY005020810
174
                               081
          NaN
175
          NaN
               NY005010810
                               296
                               297
176
          NaN
               NY005010810
182
          NaN
               NY005020830
                               083
199
          NaN
               NY005001210
                               121
203
          NaN
               NY005010360
                               043
                               098
204
          NaN
               NY005010980
213
          NaN NY005000240
                               024
>>> tdslut.tail(13)
                                               BOROUGH DEVELOPMENT_EDP
       TDS
                                    COMPLEX
213
     024.0
                                  PATTERSON
                                                 BRONX
                                                                   522.0
                       POLO GROUNDS TOWERS
                                             MANHATTAN
232
     149.0
                                                                   260.0
235
     340.0 PUBLIC SCHOOL 139 (CONVERSION)
                                             MANHATTAN
                                                                   774.0
                              RED HOOK EAST
     004.0
                                              BROOKLYN
                                                                   202.0
243
                              RED HOOK WEST
244
     079.0
                                              BROOKLYN
                                                                   202.0
                          SAINT MARY'S PARK
                                                 BRONX
261
     093.0
                                                                   673.0
                           SOTOMAYOR HOUSES
                                                 BRONX
273
     067.0
                                                                   222.0
                                              BROOKLYN
     131.0
                                   TOMPKTNS
                                                                   246.0
299
303
     342.0
           UNION AVENUE-EAST 163RD STREET
                                                 BRONX
                                                                   753.0
            UNION AVENUE-EAST 166TH STREET
                                                 BRONX
304
     356.0
                                                                   768.0
310
     061.0
                                 VAN DYKE I
                                              BROOKLYN
                                                                   216.0
     146.0
                                VAN DYKE II
                                              BROOKLYN
311
                                                                   257.0
331
     514.0
                                    WHITMAN
                                              BROOKLYN
                                                                   509.0
     OPERATING_EDP DEVELOPMENT_NY
                                            BIN
                                                         ADDRESS ZIP
                                     UNITS
                                                  M SH
213
               NaN
                       NY005216A
                                   1791.0 NaN NaN NaN
                                                              NaN NaN
232
               NaN
                         NY005062
                                    1614.0
                                            NaN NaN NaN
                                                              NaN
                                                                  NaN
                         NY005260
235
               NaN
                                     125.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
                                            NaN NaN NaN
                         NY005001
243
               NaN
                                    1411.0
                                                              NaN
                                                                   NaN
                                            NaN NaN NaN
244
                                   1480.0
               NaN
                              NaN
                                                              NaN NaN
                         NY005384
                                    1007.0
               NaN
                                            NaN NaN NaN
                                                              NaN
261
                                                                   NaN
               NaN
                         NY005022
                                    1497.0
                                            NaN NaN NaN
                                                              NaN
273
                                                                   NaN
                                            NaN NaN NaN
               NaN
                                    1046.0
299
                         NY005046
                                                             NaN NaN
303
               NaN
                         NY005214
                                    200.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
                                     120.0
304
               NaN
                         NY005291
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
310
               NaN
                         NY005013
                                    1603.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
               NaN
                         NY005055
                                     112.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
311
331
               NaN
                        NY005213A
                                    1659.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
                       AMP TDS_ID
     FACILITY
               NY005000240
213
          NaN
               NY005001490
232
          NaN
                               149
235
          NaN
               NY005011110
                               340
243
          NaN
               NY005000040
                               994
244
               NY005000790
          NaN
                               079
261
          NaN
               NY005020930
                               093
273
          NaN
               NY005010670
                               067
          NaN
               NY005011310
299
                               131
303
          NaN
               NY005013420
                               342
          NaN
                               356
304
               NY005013420
310
          NaN
               NY005000610
                               061
311
          NaN
               NY005011680
                               146
331
          NaN NY005005140
                              514
>>> tdslut = tdslut[tdslut.TDS_ID != '356']
>>> tdslut.tail(13)
                                               BOROUGH DEVELOPMENT_EDP
       TDS
                                    COMPLEX
     098.0 OCEAN BAY APARTMENTS (BAYSIDE)
204
                                                OUFFNS
                                                                   571.0
     024.0
213
                                  PATTERSON
                                                 BRONX
                                                                   522.0
                       POLO GROUNDS TOWERS
232
     149.0
                                             MANHATTAN
                                                                   260.0
     340.0 PUBLIC SCHOOL 139 (CONVERSION)
235
                                             MANHATTAN
                                                                   774.0
                              RED HOOK EAST
243
     004.0
                                              BROOKLYN
                                                                   202.0
244
     079.0
                              RED HOOK WEST
                                              BROOKLYN
                                                                   202.0
261
     093.0
                          SAINT MARY'S PARK
                                                 BRONX
                                                                   673.0
273
     067.0
                           SOTOMAYOR HOUSES
                                                 BRONX
                                                                   222.0
299
                                   TOMPKINS
                                              BROOKLYN
                                                                   246.0
     131.0
            UNION AVENUE-EAST 163RD STREET
303
     342.0
                                                 BRONX
                                                                   753.0
                                VAN DYKE I
     061.0
                                              BROOKLYN
                                                                   216.0
310
                                              BROOKLYN
                                VAN DYKE II
311
     146.0
                                                                   257.0
331
                                    WHITMAN
                                              BROOKLYN
                                                                   509.0
     OPERATING EDP DEVELOPMENT NY
                                     UNITS
                                            BIN
                                                         ADDRESS
                                                                   ZIP
                                                  M SH
                                            NaN NaN NaN
204
               NaN
                        NY005244D
                                    1395.0
                                                              NaN
                                                                   NaN
213
               NaN
                        NY005216A
                                    1791.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
                                            NaN NaN NaN
                                                              NaN
232
               NaN
                        NY005062
                                    1614.0
                                                                   NaN
235
               NaN
                         NY005260
                                     125.0
                                            NaN NaN NaN
                                                              NaN
                                                                   NaN
               NaN
                                   1411.0 NaN NaN NaN
                                                             NaN
243
                         NY005001
                                                                   NaN
```

```
1480.0
                                             NaN NaN NaN
                               NaN
                          NY005384
                                             NaN NaN NaN
261
               NaN
                                     1007.0
                                                               NaN
                                                                    NaN
                                     1497.0
                                             NaN NaN NaN
273
               NaN
                          NY005022
                                                               NaN
                                                                    NaN
299
               NaN
                          NY005046
                                     1046.0
                                             NaN NaN NaN
                                                               NaN
                                                                    NaN
                                     200.0
                                                               NaN
               NaN
                                             NaN NaN NaN
                                                                    NaN
303
                          NY005214
               NaN
                          NY005013
                                     1603.0
                                             NaN NaN NaN
                                                               NaN
                                                                    NaN
310
                                             NaN NaN NaN
               NaN
                          NY005055
                                      112.0
                                                               NaN
                                                                    NaN
311
331
               NaN
                         NY005213A
                                     1659.0
                                             NaN NaN NaN
                                                               NaN
                                                                    NaN
     FACILITY
                        AMP TDS_ID
204
          NaN
               NY005010980
                               098
213
          NaN
               NY005000240
                               024
232
          NaN
               NY005001490
                               149
                               340
235
          NaN
               NY005011110
243
          NaN
               NY005000040
                               004
244
          NaN
               NY005000790
                               079
261
          NaN
               NY005020930
                               093
               NY005010670
          NaN
273
                               067
299
               NY005011310
          NaN
                               131
303
          NaN
                               342
               NY005013420
310
          NaN
               NY005000610
                               061
311
          NaN
               NY005011680
                               146
331
          NaN
               NY005005140
                               514
>>> # O.K., load csvFR1; see if I need to map TDS or if I can use AMP?
>>> location = r'/Applications/nychatest/FR1/sr_withandwithout_workorder.csv'
>>> csvFR1 = pd.read_csv(location)
>>> csvFR1.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1483617 entries, 0 to 1483616
Data columns (total 18 columns):
                   1483617 non-null object
1483617 non-null object
FIRST_NAME
LAST NAME
SR_CREATED
                   1483617 non-null object
                   1483617 non-null object
SR_ID
SR NUM
                   1483617 non-null object
                   1483617 non-null object
SR_TYPE
SR_SUB_TYPE
                   1483617 non-null object
                   1483617 non-null object
1483617 non-null object
SR STATUS
CONTACT_ID
UNIT_ID
                   1457428 non-null object
WORK_ORDER_NUM
                   1442584 non-null float64
                   1483617 non-null object
1483617 non-null object
LOCATION
LOCATION_ ID
DESCRIPTION
                   1483617 non-null object
SCHEDULE_DATE
                   655321 non-null object
RESP_SCHEDULER
                   1437063 non-null object
                   1457970 non-null float64
PRIORITY
STATUS
                   1483617 non-null object
dtypes: float64(2), object(16)
memory usage: 203.7+ MB
>>> csvFR1.head()
   FIRST_NAME LAST_NAME
                                    SR_CREATED
                                                    SR_ID
                                                               SR_NUM
                                                                          SR_TYPE \
0
      JULIANA
                   RIVAS
                          12/31/2009 00:48:10
                                                1-1G4AWR
                                                           1-87540795
                                                                        Complaint
                          12/31/2009 00:06:42
1
   Antoinette
                    Clay
                                                1-1G2TNY
                                                           1-87471790
                                                                        Complaint
2
        Myrna
                    Seda
                          12/31/2009 00:13:43
                                                1-1G5Q23
                                                           1-87607083
                                                                        Complaint
3
                                                1-1G06WM
        Neida
                  Porras
                          12/31/2009 00:26:51
                                                           1-87348982
                                                                        Complaint
                          12/31/2009 00:36:57
4
     Jeanette
                  Vargas
                                                1-1G4AV0
                                                           1-87540732
                                                                       Complaint
           SR_SUB_TYPE SR_STATUS
                                   CONTACT ID
                                                             WORK_ORDER_NUM
                                                   UNIT_ID
                                    1-331-3036
                                                1-3V1-1347
0
  Maintenance Request
                           Closed
                                                                   7918284.0
   Maintenance Request
                           Closed
                                    1-4R8-3059
                                                 1-5EV-328
                                                                  7915342.0
   Maintenance Request
                           Closed
                                      1-8CA-37
                                                  1-KVL-41
                                                                  7915818.0
2
   Maintenance Request
3
                           Closed
                                   1-4SN-3128
                                                1-5FM-1571
                                                                   7916707.0
                                   1-402-1138
                                                1-5G4-1106
                                                                  7917423.0
  Maintenance Request
                           Closed
    LOCATION
                            LOCATION ID
                                                                  DESCRIPTION
0
   Apartment
                     083.24.024.F02.02E
                                          Leak From Above - Constant Leaking
1
    Bathroom
              030.07.007.F02.02J.BTH01
                                          Leak From Above - Constant Leaking
                                          Leak From Above - Constant Leaking
     Kitchen 063.18.040.F02.02D.KIT01
2
                                               Sink - Stoppage With Flooding
    Bathroom 074.15.015.F08.08G.BTH01
              100.02.009.F19.19C.BTH01
    Bathroom
                                                            Sink - Leak Under
  SCHEDULE_DATE RESP_SCHEDULER PRIORITY
                                            STATUS
                                           Closed
            NaN
                         SIEBEL
                                      7.0
            NaN
1
                         SIEBEL
                                       7.0 Closed
```

NaN

NaN

244

NaN

```
7.0 Closed
2
            NaN
                         SIEBEL
            NaN
                          SIEBEL
                                        7.0
                                             Closed
                                       3.0 Closed
4
     01/11/2010
                         SIEBEL
>>> # Yes, I need to map out TDS within csvFR1, then map along NY number from
csvFR1 to tdslut to df.
>>> csvFR1['TDS_ID'] = csvFR1.LOCATION_ID.str[:3]
>>> # map site_name, borough, and ny number from tdslut to csvFR1.
>>> csvFR1['SITE_NAME'] = csvFR1.TDS_ID.map(tdslut.set_index('TDS_ID')['COMPLEX'])
>>> csvFR1['BOROUGH'] = csvFR1.TDS_ID.map(tdslut.set_index('TDS_ID')['BOROUGH'])
>>> csvFR1['AMP'] = csvFR1.TDS_ID.map(tdslut.set_index('TDS_ID')['AMP'])
>>> # Only those csvFR1 rows with a mapped AMP row are the valid rows I want to
inspect.
>>> csvMask = csvFR1[csvFR1.AMP.notnull()]
>>> csvMask.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 206840 entries, 0 to 1483606
Data columns (total 22 columns):
FIRST_NAME
                   206840 non-null object
                   206840 non-null object
LAST_NAME
SR_CREATED
                   206840 non-null object
{\tt SR\_ID}
                   206840 non-null object
SR_NUM
                   206840 non-null object
SR_TYPE
                   206840 non-null object
SR_SUB_TYPE
                   206840 non-null object
                   206840 non-null object
SR STATUS
                   206840 non-null object
CONTACT_ID
UNIT ID
                   203398 non-null object
WORK_ORDER_NUM
                   200788 non-null float64
LOCATION
                   206840 non-null object
                   206840 non-null object
LOCATION_ID
DESCRIPTION
                   206840 non-null object
SCHEDULE_DATE
                   92253 non-null object
RESP SCHEDULER
                   200007 non-null object
PRIORITY
                   203024 non-null float64
STATUS
                   206840 non-null object
TDS_ID
                   206840 non-null object
SITE_NAME
                   206840 non-null object
BOROUGH
                   206840 non-null object
AMP
                   206840 non-null object
dtypes: float64(2), object(20)
memory usage: 36.3+ MB
>>> print (206840 / 1483617)
0.13941603527055837
>>> # inspect data
>>> df_inspect_amp = df['AMP'].unique()
Traceback (most recent call last):
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-
packages/pandas/indexes/base.py", line 2134, in get_loc
    return self._engine.get_loc(key)
  File "pandas/index.pyx", line 139, in pandas.index.IndexEngine.get_loc
(pandas/index.c:4443)
  File "pandas/index.pyx", line 161, in pandas.index.IndexEngine.get_loc
(pandas/index.c:4289)
  File "pandas/src/hashtable_class_helper.pxi", line 732, in
pandas.hashtable.PyObjectHashTable.get_item (pandas/hashtable.c:13733)
  File "pandas/src/hashtable_class_helper.pxi", line 740, in
pandas.hashtable.PyObjectHashTable.get_item (pandas/hashtable.c:13687)
KeyError: 'AMP'
During handling of the above exception, another exception occurred:
Traceback (most recent call last):
   File "<stdin>", line 1, in <module>
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-packages/pandas/core/frame.py",
line 2059, in __getitem__
    return self._getitem_column(key)
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-packages/pandas/core/frame.py",
line 2066, in _getitem_column
    return self._get_item_cache(key)
File "/Users/LFHLFH/anaconda/lib/python3.5/site-packages/pandas/core/generic.py", line 1386, in _get_item_cache
    values = self._data.get(item)
```

```
File "/Users/LFHLFH/anaconda/lib/python3.5/site-
packages/pandas/core/internals.py", line 3541, in get
    loc = self.items.get_loc(item)
  File "/Users/LFHLFH/anaconda/lib/python3.5/site-
packages/pandas/indexes/base.py", line 2136, in get_loc
    return self._engine.get_loc(self._maybe_cast_indexer(key))
  File "pandas/index.pyx", line 139, in pandas.index.IndexEngine.get_loc
(pandas/index.c:4443)
  File "pandas/index.pyx", line 161, in pandas.index.IndexEngine.get_loc
(pandas/index.c:4289)
  File "pandas/src/hashtable_class_helper.pxi", line 732, in
pandas.hashtable.PyObjectHashTable.get_item (pandas/hashtable.c:13733)
  File "pandas/src/hashtable_class_helper.pxi", line 740, in
pandas.hashtable.PyObjectHashTable.get_item (pandas/hashtable.c:13687)
KeyError: 'AMP'
>>> df.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 20 entries, 5250 to 6153
Data columns (total 19 columns):
INSPECTION_ID
                     20 non-null int64
DEVELOPMENT_ID
                     20 non-null object
DEVELOPMENT_NAME
                     20 non-null object
                     20 non-null object
ADDRESS
                     20 non-null object
CITY
CBSA_NAME
                     20 non-null object
CBSA CODE
                     20 non-null float64
COUNTY_NAME
                     20 non-null object
                     20 non-null float64
COUNTY_CODE
STATE_NAME
                     20 non-null object
STATE CODE
                     20 non-null int64
                     20 non-null float64
ZIP
LATITUDE
                     20 non-null float64
                     20 non-null float64
LONGITUDE
LOCATION_QUALITY
                     20 non-null object
PHA_CODE
                     20 non-null object
PHA NAME
                     20 non-null object
INSPECTION_SCORE
                     20 non-null int64
INSPECTION_DATE
                     20 non-null datetime64[ns]
dtypes: datetime64[ns](1), float64(5), int64(3), object(10)
memory usage: 3.1+ KB
>>> df.head()
                                         DEVELOPMENT_NAME
      INSPECTION_ID DEVELOPMENT_ID
                                                                      ADDRESS
5250
             558218
                        NY005020930
                                        SAINT MARY'S PARK
                                                             550 Cauldwell Ave
5180
             558138
                        NY005000650
                                                  BREVOORT
                                                                1839 Fulton St
                                               RED HOOK II
                                                                  82 Dwight St
5186
             558145
                        NY005000790
                                      OCEAN BAY (BAYSIDE)
             558189
                        NY005010980
                                                             441 Beach 51st St
5227
                        NY005000610
                                                VAN DYKE I
                                                                414 Sutter Ave
5179
             558137
          CITY
                                                           CBSA_NAME CBSA_CODE
                New York-Jersey City-White Plains, NY-NJ Metro...
New York-Jersey City-White Plains, NY-NJ Metro...
                                                                         35614.0
5250
         Bronx
      Brooklyn
5180
                                                                         35614.0
5186
                New York-Jersey City-White Plains, NY-NJ Metro...
                                                                         35614.0
      Brooklyn
                New York-Jersey City-White Plains, NY-NJ Metro...
5227
        Queens
                                                                         35614.0
5179
                New York-Jersey City-White Plains, NY-NJ Metro...
      Brooklyn
                                                                         35614.0
     COUNTY_NAME COUNTY_CODE STATE_NAME
                                            STATE_CODE
                                                              ZIP
                                                                    LATITUDE
5250
                                                         10455.0
           Bronx
                           5.0
                                        NY
                                                     36
                                                                   40.814739
                          47.0
5180
           Kings
                                        NY
                                                     36
                                                         11233.0
                                                                   40.679268
5186
                          47.0
                                        NY
           Kinas
                                                     36
                                                         11231.0
                                                                   40.676398
                                                         11691.0
                                                                   40.596459
5227
          Queens
                          81.0
                                        NY
                                                     36
5179
                          47.0
                                        NY
                                                     36
                                                         11212.0
                                                                   40.667951
           Kings
      LONGITUDE LOCATION_QUALITY PHA_CODE
                                                                      PHA_NAME
5250 -73.910338
                                      NY005
                                             New York City Housing Authority
                                 R
                                 R
                                      NY005
5180 -73.925917
                                             New York City Housing Authority
5186 -74.008879
                                 R
                                      NY005
                                             New York City Housing Authority
5227 -73.782176
                                 R
                                      NY005
                                             New York City Housing Authority
5179 -73.903626
                                 R
                                      NY005
                                             New York City Housing Authority
      INSPECTION_SCORE INSPECTION_DATE
                     59
5250
                             2015-11-10
                     58
5180
                              2015-11-30
5186
                     58
                             2015-12-15
5227
                     58
                             2015-12-08
                     57
                              2015-11-16
5179
>>> df_inspect_amp = df['DEVELOPMENT_ID'].unique()
```

```
>>> len(df_inspect_amp)
20
>>> csv_inspect_amp = csvMask['AMP'].unique()
>>> len(csv_inspect_amp)
23
>>> # Ahhhh !
>>> extra_amp = []
>>> for item in csv_insect_amp:
          if item not in df_inspect_amp:
               extra_amp.append(item)
Traceback (most recent call last):
   File "<stdin>", line 1, in <module>
NameError: name 'csv_insect_amp' is not defined
>>> for item in csv_inspect_amp:
          if item not in df_inspect_amp:
. . .
. . .
                extra_amp.append(item)
>>> len(extra_amp)
3
>>> extra amp
['NY005000040', 'NY005010810', 'NY005011680']
>>> # 0.K. to remove rows corresponding to 3 extra_amp from csvMask
>>> csvMask = csvMask[csvMask.AMP != 'NY005000040']
>>> csvMask = csvMask[csvMask.AMP != 'NY005010810']
>>> csvMask = csvMask[csvMask.AMP != 'NY005011680']
>>> csvMask.info()
<class 'pandas.core.frame.DataFrame'>
Int64Index: 191743 entries, 0 to 1483606
Data columns (total 22 columns):
FIRST_NAME
                      191743 non-null object
LAST_NAME
                      191743 non-null object
                    191743 non-null object
SR_CREATED
SR ID
                       191743 non-null object
SR_NUM
                      191743 non-null object
SR_NUM
SR_TYPE
SR_SUB_TYPE
SR_SUB_TYPE
SR_STATUS
CONTACT_ID
UNIT_ID
WORK_ORDER_NUM
LOCATION
LOCATION
LOCATION
DESCRIPTION
SCHEDULE_DATE
RESP_SCHEDULER
PRIORITY

191743 non-null object
191743 non-null object
186054 non-null object
191743 non-null object
                       186054 non-null float64
PRIORITY 
                      188192 non-null float64
                       191743 non-null object
STATUS
TDS_ID
                       191743 non-null object
SITE NAME
                      191743 non-null object
B0R0UGH
                       191743 non-null object
AMP
                       191743 non-null object
dtypes: float64(2), object(20)
memory usage: 33.6+ MB
>>> csv_inspect_amp = csvMask['AMP'].unique()
>>> len(csv_inspect_amp)
20
>>> csv_inspect_amp
>>> print(191743 / 1483617)
0.129240228441707
>>> csvSiteCounts = csvMask['SITE_NAME'].value_counts()
>>> csvSiteCounts
PATTERSON
                                            17768
RED HOOK WEST
                                            16613
VAN DYKE I
                                            15718
LINDEN
                                            13293
POLO GROUNDS TOWERS
                                            12495
SOTOMAYOR HOUSES
                                            12424
WHITMAN
                                            11972
```

MANHATTANVILLE MARLBORO	11813 10939		
OCEAN BAY APARTMENTS (BAYSIDE)	10408		
TOMPKINS	8612		
SAINT MARY'S PARK	8443		
NOSTRAND	7762		
CLINTON	7726		
MOTT HAVEN	6896		
BREV00RT	5931		
GRAVESEND	5622		
FULTON	5545		
UNION AVENUE-EAST 163RD STREET	1340		
PUBLIC SCHOOL 139 (CONVERSION)	423		
Name: SITE_NAME, dtype: int64			
>>>			